AMENDMENTS TO THE CLAIMS

1. (Currently amended) A CO_2 incubator for incubating a culture medium accommodated in an incubation space defined in a storeroom, the CO_2 incubator comprising:

CO_2 gas concentration detection means for detecting a CO_2 concentration in the incubation space,

CO_2 gas concentration setting means for setting ~~the~~ a desired CO_2 gas concentration to be present in the incubation space,

CO_2 gas supply means for supplying a CO_2 gas into the incubation space, and

a control means for controlling the CO_2 gas supply means~~,~~

~~wherein the control means~~ that executes an operation of proportion, proportion and integration, or proportion and integration and differentiation on the basis of a deviation between the CO_2 gas concentration in the incubation space as detected by said CO_2 gas concentration detection means and ~~a~~ the set CO_2 gas concentration value ~~by the CO_2 gas concentration detection means and the~~ set by said CO_2 gas concentration setting means to calculate a CO_2 gas supply time per unit time to the incubation space and a stop time, and ~~supplies a~~ to supply CO_2 gas to the incubation space from the CO_2 gas supply means in accordance with the calculated supply time and stop time.

2. (Original) The CO_2 incubator according to claim 1, wherein the CO_2 gas concentration detection means is constituted of a CO_2 sensor using infrared rays.

3. (Currently amended) The CO_2 incubator according to claim 1 ~~or 2~~, wherein a plurality of incubation spaces are disposed in the incubator and

the control means selects the gas in any incubation space, detects the CO_2 gas concentration of the selected gas by the CO_2 gas concentration detection means, and controls the

supply of the CO_2 gas to each incubation space in accordance with the detected CO_2 gas concentration.

4. (Original) The CO_2 incubator according to claim 3, wherein the control means displays the CO_2 gas concentration detected in each incubation space.

5. (Currently amended) The CO_2 incubator according to claim 2, wherein a plurality of incubation spaces are disposed in the incubator and

the control means selects the gas in any incubation space, detects the CO_2 gas concentration of the selected gas by the CO_2 gas concentration detection means, and controls the supply of the CO_2 gas to each incubation space in accordance with the detected CO_2 gas concentration.